

Title (en)

Disposable recyclable plastic articles and moldable synthetic resin blends for making the same.

Title (de)

Wiederverwendbare Wegwerfartikel aus Kunststoffen und formbare Kunststoffmischungen zu deren Herstellung.

Title (fr)

Articles jetables et recyclables en matière plastique et compositions moulables de résines synthétiques pour les fabriquer.

Publication

**EP 0513542 A2 19921119 (EN)**

Application

**EP 92106568 A 19920416**

Priority

- US 69010691 A 19910423
- US 84796092 A 19920305

Abstract (en)

Environmentally friendly, disposable, degradable and/or recyclable plastic articles, which take the place of environmentally unfriendly styrofoam, are molded from synthetic resin blends comprised of 65% to 95% of water soluble thermoplastic resin having an inverse solubility characteristic and about 35% to 5% of resins and fillers that are functionally compatible with the water soluble resin. The articles are insoluble when they contain a hot beverage or food but become soluble when exposed to tepid or cool water. The inversely soluble resin may be high molecular weight poly(ethylene oxide) or hydroxypropylcellulose, and mixtures thereof. By appropriate selection of the compatible resin and the ratio of the compatible resin to the inversely soluble resin, solubility time may be varied from minutes to weeks. The articles can be dissolved in water or by the moisture in a landfill, or can be recycled by dissolution in cool water, thereby eliminating the trash and garbage problems inherent in the use of nondegradable styrofoam.

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IPC 8 full level

**C08L 101/00** (2006.01); **B65D 65/46** (2006.01); **C08J 11/04** (2006.01); **C08L 1/28** (2006.01); **C08L 71/02** (2006.01)

CPC (source: EP KR US)

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Cited by

CN102333820A; US4598011A; FR2723744A1; EP0723859A3; US5674578A; WO9604338A1

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**EP 92106568 A 19920416**; AU 1503892 A 19920422; BR 9201481 A 19920422; CA 2065966 A 19920414; JP 10436992 A 19920423; KR 920006741 A 19920422; MX 9201890 A 19920423; TW 81103091 A 19920420; US 8007993 A 19930618